

SUBMISSION INSTRUCTIONS NO. 8

OPERATION MANUAL

I. GENERAL. [§§ 520.C., 530.D., or 540.C., 9 VAC 20-80-10] The applicant shall submit an operation manual describing in detail how the design and construction plans will be implemented throughout the active life of the facility and the post-closure care period. At a minimum, the manual shall contain all pertinent information described in these instructions.

II. SERVICE INFORMATION. [§§ 250.C.16., 250.C.17., 520.C.1., 520.C.2c, 530.D.1., and 540.C.1., 9 VAC 20-80-10] The manual shall list the types of waste that the facility will accept and the design capacity. Prohibition against acceptance of regulated hazardous wastes should be explicitly stated [§ 250.C.1., 9 VAC 20-80-10]. At the operator's discretion, the manual may place limitations on acceptance of all wastes including hazardous wastes from households and exempt small quantity generators. Note that appropriate approvals may be required for the acceptance of any special wastes. The manual must address the appropriate implementing methods and describe a training program that will enable efficient inspection for prohibited items.

III. PERSONNEL. [§§ 250.C.6., 520.C.2k, 530.E., and 540.D., 9 VAC 20-80-10].

A. Manpower. The operation manual shall describe the number and skill levels of personnel necessary to operate the site. In addition, justification will be provided that the number of operators is sufficient for the complexity of the site.

B. Training. [§ 250.C.1d, 9 VAC 20-80-10] The manual shall describe the training appropriate to tasks that will be required for operating personnel.

C. Certified Operator. [§10.1-1408.2, Code of Virginia]

Provide a statement indicating the facility will be operated under the direct supervision of a facility operator licensed by the Board for Waste Management Facility Operators.

IV. SITE PREPARATION.

A. Specifications. [§ 520.C.2a, 9 VAC 20-80-10] The operation manual for solid waste

disposal facilities shall identify the specifications provided in the Design Report and confirm that those specifications provide the following information:

- Clearing and grubbing;
- Topsoil stripping;
- Excavations;
- Berm construction;
- Drainage control structures;
- Leachate collection system;
- Access roads and entrance;
- Screening;
- Fencing;
- Groundwater monitoring; and
- Other design features.

B. Quality Control. [§§ 250.B.18., 260.B.17., or 270.B.18., and 520.C.2b, 9 VAC 20-80-10] The operation manual for solid waste disposal facilities shall identify the location of the specifications requiring documentation that the site was constructed according to the engineering plans and specifications. In addition a discussion will be provided of the field measurements, photographs, and sampling and testing procedures that will be used to verify that the in-field conditions encountered were the same as those defined in the design plans and report.

C. Timetables. [§§ 520.C.2c, 520.C.2d, 530.D.1., 540.C.1., and 540.C.2., 9 VAC 20-80-10] The operation manual for all the solid waste management facilities shall provide the timetables for the initial development and for the subsequent phases.

V. OPERATIONAL CONDITIONS. [§§ 520.C.2c, 530.D.1., or 540.C.1., 9 VAC 20-80-10] The operation manual shall contain the information on the operational conditions, techniques and methods described below.

A. Site Access. The manual shall delineate:

1. Hours of Operation. [§§ 250.C.3., 260.C.1., 270.C.1., 520.C.2c, 520.C.2i, 530.D.1.,

and 540.C.1., 9 VAC 20-80-10] Access to the site shall be limited to those hours when an attendant is on duty. The hours of operation must be stated explicitly.

2. Traffic Routing. [§§ 250.C.13d, 250.C.13e, 270.C.10., 270.C.18., 520.C.2c, 530.D.1., and 540.C.1., 9 VAC 20-80-10] The manual shall describe traffic routing under different weather conditions. It must address the minimization of fugitive dust and mud deposits on off-site and main access roads. The manual shall describe the maintenance procedures necessary to assure that internal roads are passable in all weather by ordinary vehicles. Parking areas for visitors and employees shall be delineated.

3. Inclement Weather. [§§ 520.C.2c, 530.D.1., or 540.C.1., 9 VAC 20-80-10] The manual shall describe procedures necessary to ensure continuous operation of the facility during windy, wet and cold weather conditions.

B. Waste Handling. [§§ 520.C.2c, 530.D.1., or 540.C.1., 9 VAC 20-80-10]:

1. Control Program for Unauthorized Waste. [§§ 113.C, 250.C.1., 9 VAC 20-80-10] A control program for unauthorized waste will be provided for all solid waste management facilities. A general program is required for all facilities and a more specific program is outlined for sanitary landfills.

a. Prevention measures. Discuss any prevention measures for the disposal of unauthorized waste such as signage, monitoring of incoming waste, alternate collection programs and passage of any local laws. A detailed discussion will be provided which discusses the measure as well as the implementation of the measure. For sanitary facilities, the measures discussed must include:

- Routine observation of incoming waste.
- Random inspections or other approved means to ensure incoming loads to not contain unauthorized waste

b. Training program. Discuss a training program, which provides a detailed program for facility staff to:

- Recognize unauthorized waste.
- Remove unauthorized waste.
- Report the receipt of unauthorized waste.

c. Facility response to unauthorized waste. Provide a discussion indicating that the facility may refuse to accept the unauthorized waste if it has not been unloaded. In addition, discuss specific procedures to remove, segregate and provide written records including records of the final disposition of the waste if unauthorized wastes are discovered after having been unloaded. Include in the discussion procedures used to secure the waste, contain the waste and remove the waste within 90 days of discovery. For sanitary facilities if unauthorized waste is discovered after having been unloaded the department must be notified orally within 24 hours and followed within 10 days by a written report that includes a description of the event, the date, time and cause of the event and actions taken in response.

2. Types of Wastes. [§§ 250.C.1., 250.C.16, 250.C.17., 260, 270, and 270.C.14., 9 VAC 20-80-10] The manual shall specify the types of wastes that will be accepted and excluded. For sanitary landfills, it must explicitly address each type of waste specified in the regulations. The manual for all facilities must contain a prohibition against acceptance of unauthorized wastes.

3. Litter Control. [§§ 250.C.13a or 260.C.2., 9 VAC 20-80-10] The manual for sanitary and debris landfills shall describe the methods to be used to contain litter and blowing paper to refuse holding and operating areas.

4. Dust, Odor and Vector Control. [§§ 250.C.4, 250.C.13b, 260.C.3., or 270.C.2., 9 VAC 20-80-10] The manual shall describe methods to be used to control dust, odors and vectors so they do not constitute a nuisance.

5. Open Burning. [§§ 250.C.8., 260.C.6., or 270.C.5., 9 VAC 20-80-10] The manual shall either contain a statement prohibiting open burning at the facility or a copy of any approval issued in accordance with the regulations of the State Air Pollution Control Board . In the latter case, the manual shall explicitly state that open burning will not be allowed on areas where solid waste has been disposed or areas being used for active disposal. Open burning is prohibited at CDD landfills.

6. Placement of Waste in State Waters. [§§ 250.C.10., 260.C.7., or 270.C.6., 9 VAC 20-80-10] The manual shall contain a prohibition against depositing solid waste in State waters and against allowing the waste to enter such waters.

7. Salvaging. [§§ 250.C.13c or 260.C.8., 9 VAC 20-80-10] The manual for solid waste disposal facilities shall specify whether salvaging will be permitted. If so, it shall specify a designated salvage area which will preclude interference with operation and creation of hazards or nuisances.

8. Filling Operation. [§§ 250.C.13f, 260.C.11.b, or 270.C.12a and 270.C.15., 270.B.10., 520.A.1j, 520.B.2., 520.C.2.c, 9 VAC 20-80-10]. The operations manual for a solid waste disposal facility shall specify the method which will be used in filling the cells and the required direction. Provide the height of the compacted lifts of waste, and the cover/waste ratio. Explain the rationale for the selected height. Provide information on the average daily waste volume. The manual shall also specify how the size of the working face will be minimized. The methods to be used to delineate the working face, queuing of vehicles and other waste unloading procedures.

9. Handling of Special Wastes. [§§ 250.C.16b, 250.C.16o, 250.C.16t, 250.C.16x, and 270.C.11., 9 VAC 20-80-10] The manual for a solid waste disposal facility shall describe methods that will be used to manage and dispose of any special wastes including the following wastes:

- Small animal carcasses;
- and wastewater treatment sludges;
- Incinerator and air pollution control residues;
- Asbestos;
- PCB wastes;
- Liquids;
- Tires;
- Drums;
- White goods; and
- Soil contaminated with petroleum products.

If the facility will not accept any of the above wastes, the manual shall explicitly so state. In addition, facilities storing tires will provide a discussion of tire storage, which addresses the applicable requirements of 9 VAC 20-80-670.

If the facility intends to accept other special wastes, waste screening and waste handling procedures will be outlined in this section or in a separate waste acceptance plan. For those special wastes not specifically included in the permit, provide a statement indicating that the facility will obtain approvals for special waste acceptance from the director (the appropriate regional office) in accordance with the procedures in Part VIII.

10. Bird Hazard. [§ 250.C.13g, 9 VAC 20-80-10] In case of solid waste disposal facilities located within the bird strike zone of an airport runway, the manual shall describe measures that will be undertaken to prevent hazard to aircraft. The manual shall include appropriate documentation.

C. Equipment. [§§ 250.C.6., 260.C.5., 270.C.4., 270.C.17., 520.C.2c, 530.D.1., and 540.C.1., 9 VAC 20-80-10] The manual shall list the number and types of equipment that will be available at the facility. It shall also describe what provisions have been made to ensure availability of substitute (backup) equipment. Names and telephone numbers of appropriate persons to be contacted shall be included.

D. Compaction and Cover. [§§ 250.C.2., 260.C.10., 260.C.11. and ., or 270.C.12., 9 VAC 20-80-10] In case of solid waste disposal facilities, the operation manual shall contain the following information:

1. Compaction. [§§ 250.C.2a or 260.C.11a, 9 VAC 20-80-10] The manual shall state the height of the layers at the work face into which the waste will be spread before compaction.

2. Lifts. [§§ 250.C.2b or 270.C.12b, 9 VAC 20-80-10] The manual shall state the lift heights that will be used. The selection of the height shall be supported with calculations based on the daily volume and the width of the open work face.

3. Daily Cover. [§§ 250.C.2c or 270.C.12c, 9 VAC 20-80-10] In case of sanitary landfills and, when appropriate, industrial landfills, the manual shall provide for the placement of six inches of compacted soil or approved alternate daily cover material prior to the end of each working day. If alternate daily cover will be used the storage and application will be discussed in this section.

4. Weekly Cover. In case of debris landfills, the manual shall provide for:

a. Progressive Cover. [§ 260.C.11b, 9 VAC 20-80-10] A progressive cover of proper thickness so that at the end of the work-week the working face will be fully covered. The manual shall also show that the nature of the waste does not require more frequent cover for safety and aesthetic purposes.

b. Fire Breaks. [§ 260.C.10., 9 VAC 20-80-10] Firebreaks of proper material and thickness to be placed on top, side slopes, and the working face at the end of the work week. Should the nature of the waste not require the establishment of fire breaks, the manual should state so explicitly.

5. Periodic Cover. [§ 270.C.12c, 9 VAC 20-80-10] In case of industrial landfills exempt from the requirements for daily cover, the manual shall specify the type and frequency of the periodic cover that will be applied to minimize exposure to precipitation and to control dust.

6. Intermediate Cover. [§§ 250.C.2d, 260.C.11c, or 270.C.12d, 9 VAC 20-80-10] The manual shall describe the conditions under which the intermediate cover will be applied.

7. Final Cover. [§§ 250.C.2e, 260.C.11d, or 270.C.12.e., 9 VAC 20-80-10] The manual shall describe the conditions under which the final cover will be applied. It should also contain cross references to the pertinent portions of the closure plan. See also *Submission Instructions No.6. Closure*

8. Vegetative Cover. [§§ 250.C.2f, 260.C.11.e, 270.C.13., 520.C.2c, and 520.C.2j, 9 VAC 20-80-10] The manual shall include a landscaping plan delineating the existing site vegetation to be retained, and discussing the methods to be employed in order to ensure protection during clearing, grading and construction phases of the project and the vegetation that will be planted to protect final cover. Information relating to vegetation type, location and purpose, such as for buffer, screening or aesthetics, and schedules for planting shall be part of the plan.

9. Stockpiles. [§§ 250.C.2c or 270.C.16., 9 VAC 20-80-10] The manual shall require that at least three days of cover soil be maintained at the facility. It should also show the calculations of the required volume and describe the location of the stockpile. Site plans should show the location of the stockpile.

E. Safety. The operation manual shall include the following information:

1. Safety Program. [§§ 250.C.5., 260.C.4., 270.C.3., and 520.C.2h, 9 VAC 20-80-10] In case of a solid waste disposal facility, the manual shall contain, as an appendix, a safety plan which includes a description of the measures that will be taken to protect facility and other personnel from injury during operation.

2. Fire Control Plan. [§§ 250.C.9. or 270.C.5., and 520.C.2c, 520.C.2.k, 530.D.1., 530.E or 540.C.1., 9 VAC 20-80-10] See *Submission Instructions No. 7, Emergency Plan*.

F. Inspection Plan. [§§ 250.C.1., ., and 520.C.2f, 9 VAC 20-80-10] In case of a solid waste disposal facility, the operation manual shall include an inspection plan describing a schedule for inspecting all applicable major aspects of facility operation necessary to ensure compliance with the regulations. Features of the facility that should be addressed in the inspection plan include gates, fencing and other access controls or barriers, scale house, communications equipment, emergency equipment, stormwater appurtenances, leachate appurtenances, salvage areas, access roads, closed areas and areas with intermediate cover, the working face and the gas management system. In addition, the numbers, types and maintenance of the machinery used at the facility should also be provided. Note that in some cases an entire facility may not be closed, but some closed areas may be subject to inspection based on a post closure inspection checklist. At a minimum, the plan shall:

- Describe the frequency of the inspections which is to be based on the rate of potential equipment deterioration or malfunction;
- Describe the areas of the facility subject to spills and areas in which significant adverse consequences may result from breakdown;
- Describe the schedule for inspecting monitoring, safety, and emergency equipment, security devices, and process operating and structural equipment; and
- Describe the system for inspecting incoming loads to detect and prevent disposal of regulated hazardous waste; and
- Records of inspections.

VI. CONTROL AND MONITORING OF LIQUIDS AND GAS. [§§ 520.C.2c, 530.D.1., or 540.C.1., 9 VAC 20-80-10].

A. Solid Waste Disposal Facilities. In case of a solid waste disposal facility, the operation manual shall describe:

- how the leachate will be collected, monitored and treated to prevent unpermitted discharge to state waters, and the methods used in the maintenance of the collection system. If portable pumps are to be used, a schedule to rotate use should be included. [§§ 260.C.14., 270.C.19., and 290.D., 9 VAC 20-80-10];
- the procedures that will be observed in monitoring gas migration at the facility. Reference applicable plans and see *Submission Instruction 13* for details [§ 280., 9 VAC 20-80-10]; and
- the operation and maintenance of the groundwater monitoring system, if such description has not been made a separate portion of the permit application [§§ 250.C.14., 260.C.12., or 270.C.8., 9 VAC 20-80-10]. For detail see *Submission Instructions No. 5*.

B. All Solid Waste Management Facilities. In case of all facilities, the manual shall describe the maintenance of the drainage and erosion control systems.

VII. RECORDS. [§§ 250.C.18., 260.C.9., 270.C.7., 520.C.2c, 530.D.1., and 540.C.1., 9 VAC 20-80-10] The operation manual shall describe the type of information that will be collected and kept on the quantities of wastes received and processed and on the environmental monitoring (for groundwater monitoring, see *Submission Instructions No. 5, 11 or 12* as applicable.).